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## Past Proceedings: 4th International Conference on Recent Advances in Geotechnical Earthquake Engineering & Soil Dynamics (2001)

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Proceedings: Fourth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics and Symposium in Honor of Professor W.D. Liam Finn  
San Diego, California, March 26-31, 2001

**FOURTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN  
GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS  
SAN DIEGO, CALIFORNIA (USA) MARCH 26-31, 2001  
INCLUDING SYMPOSIUM  
IN HONOR OF PROFESSOR W.D. LIAM FINN MARCH 29, 2001**

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**Shamsher Prakash**  
(USA)

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**Ricardo Dobry**  
(USA)

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Contributions on Earth Dams by Professor W. D. Liam Finn  
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**W.D. Liam Finn**  
(Japan)

Final comments and conclusion  
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**George Gazetas, National Technical University (GREECE)**  
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**I.M. Idriss, University of California, Davis, CA (USA)**  
*Ground Motion Amplification/Attenuation and Design*  
Motions (SOAP 7)\*\* **Not received**

**Cliff J. Roblee - Caltrans, Sacramento, CA (USA)**  
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**Ezio Faccioli, Politecnico Di Milano, (Italy)**

*Investigation of Seismic Soil-Footing Interaction by Large Scale Cyclic Tests and Analytical Models (SPL – 5)*

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S. Thevanayagam G.R. Martin T. Shenthan J. Liang (USA)	Post-Liquefaction Pore Pressure Dissipation and Densification in Silty Soils. 4.28
Zhi-Liang Wang C. Y. Chang Chin Man Mok (USA)	Evaluation of Site Response Using Downhole Array Data from a Liquefied Site. 4.30
Maotian Luan Dong Wang (China)	Dynamic Response of Seabed Under Wave-Induced Loading. 4.31
Nasser Mansoor Tina Niemi Anil Misra (USA)	Liquefaction Potential Evaluation Along Active Faults at the Head of the Gulf of Aqaba, Jordan. 4.32
Susumu Yasuda Nozomu Yoshida Hiroyoshi Kiku Hidenori Abo Masato Uda (Japan)	Analyses of Liquefaction-Induced Deformation of Grounds and Structures by a Simple Method. 4.34



Pradeep U. Kurup Nitin K. Dudani (USA)	CPT Evaluation of Liquefaction Potential Using Neural Networks. 4.36
Gonghui Wang Kyoji Sassa (Japan)	Fluidization Behavior of Silty Soils in the Shear Zone Based on Ring Shear Tests. 4.37
Akira Yamaguchi Motoki Kazama Hirofumi Toyota Masaki Kitazume Takahiro Sugano (Japan)	Reproduction of Array Observation Records by Means of Centrifuge Shaking Table Model. 4.38
Sheng-Huoo Ni Horng-Yuan Lai (China)	Investigation of Sites Liquefied During Taiwan Chi-Chi Earthquake. 4.39
Shigeru Miwa Mitsuo Nozu Osamu Ozutsumi Susumu Iai Atsushi Yashima Susumu Yasuda (Japan)	Effective Stress Analysis for Evaluating the Effect of the Sand Compaction Pile Method During the 1995 Hyogoken-Nambu Earthquake. 4.42
Yasuo Tanaka Y. Yagiura K. Shimokawa S. Higashi T. Kishida N. Mizuwake (Japan)	Study of Liquefaction Damages of Quay-Walls and Breakwaters During Kobe Earthquake. 4.44
Korhan Adalier (Singapore)	Liquefaction and Ground Failure During the 1998 Adana (Turkey) Earthquake and Lab Model Simulations. 4.47
Victor M. Taboada- Urtuzuastegui Francisco J. Villegas- Rodriguez Francisco Hernandez- Martinez (Mexico)	Prediction of Lateral Displacements Induced by Liquefaction in the Port of Manzanillo, Mexico During the Earthquake of October 9, 1995. 4.53
Anubhav N. S. V. Kameswara Rao (India)	Liquefaction Studies on Silty Clays Using Cyclic Triaxial Tests. 4.55
Kazue Wakamatsu Akio Yamamoto Ichiro Tanaka (Japan)	Geomorphological Criteria for Evaluating Liquefaction Potential Considering the Level-2 Ground Motion in Japan. 4.56



Takashi Tazoh  
Masayoshi Sato  
Hideyuki Mano  
(Japan)

The Cause of Ground Fissures Radiating From the Footing of a Bridge Pier Generated by the 1995 Great Hanshin Earthquake. 4.57

N. Ravichandran  
Kimihiro Meguro  
(Japan)

3-D Modeling of Liquefaction Phenomenon Using Distinct Element Method. 4.58

Umesh Dayal  
Sudhir K. Jain  
(India)

Liquefaction Analysis of a Bridge Site in Assam (India). 4.59

Fathey N. Elsaid  
(USA)

Seismic Liquefaction Assessment for the JFK Light Rail System Project. 4.60

### **SESSION 5**

#### **Stability and Displacement Performance of Slopes, Landfills and Earth Dams Under Earthquakes**

Azm S. Al-Homoud  
(United Arab Emirates)  
Wisam W. Tahtamoni  
(Jordan)

Modeling Uncertainty in Seismic Stability and Earthquake Induced Displacement of Earth Slopes Under Short Term Conditions. 5.01

David Cummings  
(USA)

Earthquake-Induced Spalling of Rock Slopes, Northridge Earthquake, January 17, 1994 – A Case Study. 5.04

Nasim Uddin  
J.F. Baltz  
(USA)

Seismic Evaluation and Remediation of Embankment Dam. 5.05

Akihiko Wakai  
Keizo Ugai  
Masayoshi Sato  
Takashi Tazoh  
(Japan)

Numerical Analysis for Seismic Behavior of a Slope Based on a Simple Cyclic Loading Model. 5.06

Jian Zhou  
Yong Chi  
Peijiang Qi  
(China)

3-D Dynamic Analysis of Taiyuan Fly Ash Dam. 5.07

Robert C. Lo  
Earle J. Kloth  
(Canada)  
W.D. Liam Finn  
(Japan)

Seismic Design of Tailings Dam An Overview of its Evolution and New Challenges. 5.08

Soheil Razavi  
Hiroyuki Kimura  
(Japan)

Three Dimensional Nonlinear Joint Analysis for Assessment of Slope Stability. 5.09



Zhao Jian-ming Wang Wen-shao (China)	Study on Earthquake-Induced Permanent Deformation of Earth-Rockfill Dams. 5.12
Tomoya Iwashita (Japan)	Numerical Simulation of Sliding of an Earth Dam During the 1995 Kobe Earthquake 5.13
Joseph Wartmen Jonathan D. Bray Raymond B. Seed (USA)	Shaking Table Experiment of a Model Slope Subjected to a Pair of Repeated Ground Motions. 5.14
Allen Yourman, Jr. Ambi Thurai V.R. Nadeswaran Gerald M. Diaz (USA)	Review of Slope Stability Analysis in the Ports of Long Beach and Los Angeles. 5.15
Mohsen Beikae (USA)	Is Newmark Method Conservative? 5.16
Sarada K. Sarma George Cossenas (United Kingdom)	Dynamic Response of Dam-Layer System to Earthquake Excitations. 5.19
J.C. Chern M.S. Tsai (China)	Seismic Safety Analysis of Earth Dam – Case History Studies. 5.20
Evelyne Foerster Hormoz Modaresi (France)	Large Motion Assessment in Soils Under Dynamic Loading. 5.21
Maotian Luan Junxia Xin Xingzheng Wu (China)	Effects of Dynamic Properties of Rockfill Materials on Seismic Response of Concrete-Faced Rockfill Dams. 5.22
Taka-aki Mizutani Ikuo Towhata (Japan)	Model Tests on Mitigation of Liquefaction-Induced Subsidence of Dike by Using Embedded Sheet-Pile Walls. 5.24
Reza Naderi Nader Hataf Arsalan Ghahramani (Iran)	Using Discontinuous Deformation Analysis to Investigate the Dynamic Stability of Tunnels in Jointed Rocks Under Earthquake Loading. 5.25
Kazunori Uchida Tuyosi Torii Syuichi Tsujino Susumu Ando Keiji Higasio Taniaki Yamamoto (Japan)	A Study on Failure Mechanism of Embankment Dams for Irrigation Damaged by the 1995 Hyogoken-Nanbu Earthquake. 5.27



Dimitrios Loukidis Sang-Ho Lee Quanghee Yi Philippe L. Bourdeau (USA)	Analytical Study of the Nikawa Landslide. 5.31
Giovanna Biscontin Juan M. Pestana (USA) Farrokh Nadim Knut Andersen (Norway)	Seismic Response of Normally Consolidated Cohesive Soils in Gently Inclined Submerged Slopes. 5.32
Behrouz Gatmiri (Iran) K. C. Vossoughi B. Jenab-Vossoughi (France)	3-D Dynamic Analysis for Stability of Geotechnical Structures. 5.33
Armando L. Simonelli Pietro Di Stefano (Italy)	Effects of Vertical Seismic Accelerations on Slope Displacements. 5.34
H.C. Nainwal Ajay K. Naithani (India)	Study of Seismically Induced Landslide Zones, Related to Chamoli Earthquake of 1999, Garhwal Himalaya, India. 5.37
Takeji Kokusho Katsuhisa Fujita (Japan)	Water Films Involved in Post-Liquefaction Flow Failure in Niigata City During the 1964 Niigata Earthquake. 5.38
B.E. Khusanov S.I. Umarkhonov (Uzbekistan)	Study of Dynamic Behavior of Ground Dams with Account of Moisture Content Under Seismic Actions. 5.39
S.I. Umarkhonov (Uzbekistan)	Dynamic Design of Ground Dams Under The Action of Dynamic Loads. 5.41
Styopa Karapetyan Tamara Babayan Levon Manukyan (Armenia)	Definition of Seismic Hazard Degree of Dams and their Territories, Armenia. 5.42
Selami O. Tezcan Shobha K. Bhatia Stefan Fiegle (USA)	Seismic Stability and Rehabilitation Analysis of a Hydraulic Fill Dam. 5.43



## **SESSION 6**

### **Soil-Structure Interaction Under Dynamic Loading, for Both Shallow and Deep Foundations**

Jayaprakash A. Amin Jagdish J. Bhatt Jagdish R. Joshi (USA)	Structure Soil Structure Interaction Effects: Seismic Analysis of Safety Related Collocated Concrete Structures. 6.01
Yingcai Han (Canada)	Dynamic Soil-Pile-Structure Interaction. 6.04
Rocco Wagner Konstanin Meskouris (Germany)	Granular Material Behaviour Under Dynamic Excitation. 6.07
M. R. Massimino M. Maugeri D. Novita (Italy)	Experimental, Numerical and Theoretical Evaluation of the Stiffnesses of a Soil-Foundation Model by Shaking-Table Test. 6.09
Mohamed Ashour Gary Norris A. Shamsabadi (USA)	Effect of Non-Linear Behavior of Pile Material on the Response of Laterally Loaded Piles. 6.10
Mohamed Ashour Patrick Pilling Gary Norris (USA)	Assessment of Pile Group Response Under Lateral Load. 6.11
Yukihisa Tanaka (Japan)	Dynamic SSI Analyses Considering Anisotropy of the Foundation Gravelly Layer in Hualien, Taiwan. 6.13
Jian Zhou Xiaoyan Hu Yong Chi (China)	Seismic Analysis of Tunnel Surrounded by Soft Soil in Shanghai. 6.14
Misko Cubrinovski Kenji Ishihara Takahiro Kijima (Japan)	Effects of Liquefaction on Seismic Response of a Storage Tank on Pile Foundations. 6.15
Xiu Lou Yoshitaka Murono (Japan)	Seismic Analysis of Pile Foundations Damaged in the January 17, 1995 South Hyogo Earthquake by Using the Seismic Deformation Method. 6.18



Shuji Tamura Kohji Tokimatsu Shunji Fujii Tomio Tsuchiya Masanobu Miyazaki (Japan)	Earth Pressure Acting on Embedded Footing During Soil Liquefaction by Large-Scale Shaking Table Test. 6.19
Dan Yang (Canada) Ricardo Dobry Ralph B. Peck (USA)	Foundation-Soil-Inclusion Interaction Modeling for Rion-Antirion Bridge Seismic Analysis. 6.20
Roberto Cairo Enrico Conte Giovanni Dente (Italy)	Simplified Methods for the Dynamic Analysis of Single Pile In Layered Soils. 6.21
Ryosuke Uzuoka Tetsuo Kubo Atsushi Yashima Feng Zhang (Japan)	Numerical Study on 3-Dimensional Behavior of a Damaged Pile Foundation During the 1995 Hyogo-ken Nanbu Earthquake. 6.22
Ga Zhang Jian-Min Zhang (China)	Simplified Evaluation for Dynamic Layered Soils-Structure Interaction. 6.23
Kohji Tokimatsu Hiroko Suzuki Yasutsugu Suzuki (Japan)	Back-Calculated p-y Relation of Liquefied Soils From Large Shaking Table Tests. 6.24
George Mylonakis Demetri Roubas (USA)	Lateral Impedance of Single Piles in Inhomogeneous Soil. 6.27
Masahiro Miyaoura Seiichi Miura Shima Kawamura Shoji Yokohama (Japan)	Lateral Flow Deformation Evaluation of Ground-Structure System Under Various Cyclic Loading Conditions. 6.28
Rui Carrilho Gomes Carlos Sousa Oliveira Antonio Gomes Correia (Portugal)	Seismic Response Assessment of Underground Structure Cross-Sections Using Response Spectra. 6.29
Joseph Wartman Shahriar Vahdani Linda Liang (USA)	Seismic Soil-Structure Interaction Analyses of an Office Building in Oakland, California. 6.30



K.K.Koo K.T.Chau Y. Wong S.S.Lam X.Yang (China)	A Continuum Model for Soil-Pile-Structure Interactions Under Earthquake Excitation. 6.31
Kaeko Yahata Mutsuhiro Yoshizawa Yasutsugu Suzuki Kohji Tokimatsu Shuji Tamura Hideki Funahara (Japan)	Pile Response Characteristics of Liquefied Soil Layers In Shaking Table Tests of a Large Scale Laminar Shear Box. 6.34
Oliver Fischer Andreas Maurial Konstantin Meskouris Carsten Konke Falko Schube (Germany)	Design Concept for High Speed Railway Bridges in Regions with High Seismic Activity and Soft Soil. 6.35
Ismail M. Ismail Chris Mullen (USA)	Computational Simulation Procedure for Soil-Structure Interaction Modeling in Building Seismic Damage Response. 6.36
Hirokazu Takemiya Jorge Shimabuku Yoshifumi Katayama Kentaro Kishida Satoru Furukawa (Japan)	Nonlinear Response of Underground Duct Structures with Due Attention to Seismic Input Ground Motions. 6.39
C.-Y.Chang Chin-Man Mok Z.- L. Wang R.Settgast C.-C.Chin H.M. Gonnermann M.A.Ketchum F.Waggoner (USA)	Dynamic Soil-Foundation-Structure Interaction Analyses of Large Caissons. 6.40
Fuming Wang Maotian Luan Yigong Ji (China)	A Simplified Method of Vibration Analysis of Layered Foundation and Applications in Pavement Parameter Identification. 6.42
Hamid Fallah (Iran)	Assessment of the Foundation of a Near Shore Power Plant Under Earthquake Loading. 6.45
Rabah Iddir Nidir Laradi (Algeria)	Analysis and Behavior of a Rigid Foundation Massif Under the Effect of Vibrations (Application of Barkan Method). 6.46





B.K. Maheshwari  
K.Z. Truman  
P.L. Gould  
(USA)

Effect of Plasticity of Soil on Seismic Response of Pile Foundation:  
Parametric Study. 6.47

Moon K. Kim  
Yun M. Lim  
Min K. Kim  
Seok H. Cho  
(Korea)

Soil-Pile Interaction Analysis Using FE-BE Coupling in Frequency Domain. 6.48

Lindita Kellezi  
(Denmark)  
Hirokazu Takemiya  
(Japan)

An Effective Local Absorbing Boundary for 3D FEM Time Domain Analyses. 6.49

Shamsher Prakash  
Houda Jadi  
(USA)

Prediction of Lateral Dynamic Response of Single Piles Embedded in Fine Soils.  
6.50

## SESSION 7

### Seismic Analysis and Design of Retaining and Marine Structures, Field Studies on Retaining Walls in California, Japan and Around the World

C. Stamatopoulos  
E. Velgaki  
(Greece)

Critical Acceleration and Seismic Displacement of Vertical Gravity Walls By a Two  
Body Model. 7.02

Mamoru Kanatani  
Hitoshi Tochigi  
Tadashi Kawai  
Hiroyuki Ishikawa  
(Japan)

Effects of Ground Improvement and Armoured Embankment to the  
Displacements of the Seawalls and Back Fill During Earthquake. 7.03

Yingwei Wu  
Shamsher Prakash  
(USA)

Seismic Displacements of Rigid Retaining Walls. 7.05

Zhaohui Yang  
Ahmed Elgamal  
Tarek Abdoun  
(USA)  
Chung-Jung Lee  
(China)

A Numerical Study of Lateral Spreading Behind a Caisson Type Quay Wall. 7.06

Giovanni Biondi  
Ernesto Cascone  
Michele Maugeri  
(Italy)

Seismic Response of Submerged Cohesionless Slopes. 7.07



Jian-Min Zhang Deji Li (China)	Seismic Active Earth Pressure Considering Effect of Strain Localization. 7.09
Abdul-Hamid Soubra (France) Borut Macuh (Slovenia)	Seismic Active and Passive Earth Pressures on Rigid Retaining Structures by a Kinematical Approach. 7.10
Yoshinori Nagayama Tamotsu Matsui Ikuo Yasukawa Hiroshi Kasai (Japan)	A Field Study and Dynamic Finite Element Analysis of Railway Retaining Structures Damaged by the Hyogoken-Nambu Earthquake (1995). 7.11
Ernesto Cascone Agatino S. LoGrasso Michele Maugeri (Italy)	Dynamic Model Tests on Gravity Retaining Walls with Various Surcharge Conditions. 7.12
Kenji Hayashi Tomonari Imono Tamotsu Matsui Kazuhiro Oda Hitoshi Miyamoto (Japan)	Analytical Evaluation for Seismic Behavior of Shore Structures on Liquefied Area During Earthquakes. 7.13
A. J. Mair D. Muir Wood (United Kingdom)	Seismic Analysis and Retrofit of Dock Walls. 7.14
Liping Yan Geoffrey R. Martin (USA)	Seismic Analysis of Bridge Abutments: A Numerical Simulation of a Field Load Test. 7.15
Kianoosh Hatami Richard J. Bathurst (Canada)	Investigation of Seismic Response of Reinforced Soil Retaining Walls. 7.18
Ching-Chuan Huang (China) Fumio Tatsuoka (Japan)	Stability Analysis of the Geosynthetic-Reinforced Modular Block Walls Damaged During the Chi-Chi Earthquake. 7.19
Tamotsu Matsui Kazuhiro Oda Choji Kuroda Ikuo Aoshima Akinori Nakahira Hiroshi Murakami Naoto Suzuki (Japan)	Evaluation of Seismic Safety of a Large Caisson Structure. 7.20



Hemanta Hazarika  
Juichi Nakazawa  
Hiroshi Matsuzawa  
(Japan)  
Dawit Negussey  
(USA)

On the Seismic Earth Pressure Reduction Against Retaining Structures Using  
Lightweight Geofoam Fill. 7.22

M. Momenzadeh  
Kenneth Jackura  
(USA)

Evaluation of a Soldier Pile-Tieback Wall at Carquinez Bridge. 7.24

Sri T. Srithar  
(Australia)  
Upul D. Atukorala  
(Canada)

Seismic Analysis of a Partially-Buried Drinking Water Reservoir. 7.30

Teresa Crespellani  
Claudia Madaia  
Giovanni Vannucchi  
(Italy)

A Case History: Seismic Analysis of the Retaining Wall of the "Sacro Convento" in  
Assisi (Italy). 7.31

Donald Wotring  
Glen Andersen  
(USA)

Displacement-Based Design Criteria for Gravity Retaining Walls in Light of Recent  
Earthquakes. 7.33

## **SESSION 8**

### **Seismic Analysis and Retrofit of Foundations of Bridges and other Sub-Structures, Seismic Retrofit Projects and Procedures in California**

Nina Fotieva  
Nikolay Bulychiev  
Andrew Sammal  
(Russia)

Design of Tunnels Located Near Slopes in Seismic Areas. 8.03

Key Rosebrook  
Boris Jeremic  
Dan Wilson  
Bruce Kutter  
Amy Smith  
Dana Humphrey  
Stacey Patenaud  
(USA)

Centrifuge Characterization and Numerical Modeling of the Dynamic Properties of  
Tire Shreds for Use as Bridge Abutment Backfill. 8.07

Dimitrios Loukidis  
Rodrigo Salgado  
Antonio Bobet  
(USA)

Seismic Design of Pile Foundations in Southern Indiana. 8.09

Kioumars Zand Parsa  
H. Zamani Abyaneh  
(Iran)

Foundation Sign Correction in Stochastic Analysis Procedures. 8.10



Eiji Wakita  
Masayoshi Sato  
Takashi Tazoh  
(Japan)

Earthquake Resistance of New Type Viaduct Structure. 8.11

Dharma Wijewickreme  
Allen Mitchell  
Trevor Fitzell  
(Canada)

Seismic Evaluation and Retrofit of a Major Natural Gas Transmission System. 8.12

Ronaldo Luna  
Genda Chen  
Yulman Munaf  
Huimin Mu  
Shamsher Prakash  
Paul Santi  
Tom Fennessey  
Dave Hoffman  
(USA)

Earthquake Assessment of Critical Structures for Route US 60 Missouri. 8.13

## **SESSION 9**

### **Model and Full-Scale Test of Geotechnical Structures Including Centrifuge Tests.**

Awad Al-Karni  
(Saudi Arabia)  
Muniram Budhu  
(USA)

An Experimental Study of Seismic Bearing Capacity of Shallow Footings. 9.03

Stuart Haigh  
S. P.G. Madabhushi  
K. Soga  
(United Kingdom)  
Youichi Taji  
Y. Shamoto  
(Japan)

Newmarkian Analysis of Liquefied Flow in Centrifuge Model Earthquakes. 9.06

Hideo Sekiguchi  
Hayoung Kim  
Katsutoshi Kita  
(Japan)

Shaking Table Tests on Seismic Deformation of Composite Breakwaters. 9.09

Hernan Martinez-  
Carvajal  
(Colombia)  
Victor M. Taboada-  
Urtuzuastegui  
Miguel P. Romo  
(Mexico)

Analysis of Some Downhole Acceleration Records from "Central De Abasto Oficinas"  
Site at Mexico City. 9.10



Awad Ali Al-Karni (Saudi Arabia)	Shear Strength Reduction Due to Excess Pore Water Pressure. 9.12
W.Blair Gohl J.A. Howie C.E.Rea (Canada)	Use of Controlled Detonation of Explosives for Liquefaction Testing. 9.13
Nason J. McCullough Scott M. Schlechter Stephen E. Dickenson (USA)	Centrifuge Modeling of Pile Supported Wharves for Seismic Hazards. 9.15
Gao Lin (China)	Similarity Rule for Dynamic Model Tests of Geotechnical Structures. 9.16
Jae-Soon Choi Inn-Joon Park Soo-II Kim (Korea)	Numerical Analysis of Saturated Sand Under Dynamic Loads. 9.17
Xiao Wei Lichu Fan Xiaoping Wu (China)	Shaking Table Tests of Seismic Pile-Soil-Pier Structure Interaction. 9.18
Jean-Louis Chazelas Odile Abraham Jean-Francois Semblat (France)	Identification of Different Seismic Waves Generated by Foundation Vibration in the Centrifuge: Travel Time, Spectral and Numerical Investigations. 9.21
Masanori Iiba Shin-ichiro Tamori Y. Kitagawa (Japan)	Shaking Table Test on Effects of Combination of Soil and Building Properties on Seismic Response of Building. 9.23
Jong-Rim Lee In-Kil Choi Jeong-Moon Seo (Korea) Yo-Yoon Cho (USA)	Refining Historical Earthquake Data Through Modeling and Scale Model Tests. 9.29
Masaki Kitazume Yoshiaki Kikuchi Keigo Masuda H. Hashizume (Japan)	Dynamic Centrifuge Tests on Sea Revetment with Multi-Anchors. 9.30
Berrak Teymur S.P.G. Madabhushi (United Kingdom)	CPT Assessment of Boundary Effects in Dynamic Centrifuge Modelling. 9.31



Masayoshi Sato  
Masafumi Ogasawara  
Takashi Tazoh  
(Japan)

Reproduction of Lateral Ground Displacements and Lateral-Flow Earth Pressures  
Acting on Pile Foundations Using Centrifuge Modeling. 9.33

Kerop Janoyan  
Jonathan P. Stewart  
John W. Wallace  
(USA)

Preliminary Results for Full Scale Drilled Shaft Tested Under Cyclic Lateral Loading  
9.34

Jean-Louis Chazelas  
(France)

Evaluation of the Shear Modulus in Models for Shallow-Foundation Dynamics within  
the Elastic Domain. 9.35

Noriyuki Horii  
Yasuo Toyosawa  
Satoshi Tamate  
Hideo Hashizume  
(Japan)

Centrifuge Model Test on the Stability of a Clayey Ground Improved by Deep Mixing  
Method With a Low Improvement Ratio. 9.36

Hiroki Kurose  
Masayuki Sato  
Hitoshi Azuma  
Katsumi Ozeki  
Nozomu Yoshida  
(Japan)

Effective Stress Analysis by Shear Strain Controllable Model and its Application to  
Centrifuge Shaking Model Test. 9.37

## **SESSION 10**

### **Case Histories of Geotechnical Earthquake Engineering, Failures and Geotechnical Analysis of Recent Earthquakes.**

Shigeru Tani  
(Japan)

Consideration of Earthquake Resistant of Large Fill Dams. 10.03

A.C. Stamatopoulos  
C.A. Stamatopoulos  
S. G. Aneroussis  
(Greece)

Geotechnical Factors in Recent Earthquake-Induced Structural Failures in Greece.  
10.04

Yung-Show Fang  
Tsang-Jiang Chen  
Yu-Chih Yang  
Cheng-Chieh Tang  
(China)

The Behavior of Retaining Walls Under 1999 Chi-Chi Earthquake. 10.06

H.W. Yang  
S.M. Lin  
(China)  
Daniel Chu  
(USA)

The Observed Building Damage Associated with Fault Movement in 1999 Chi-Chi  
(Taiwan) Earthquake. 10.13



I. G. Kerimov Anar Alizada (Azerbaijan)	Studying of Some Medium Manifestations Aspects in Relation to Some Recent Earthquakes. 10.14
Elizabeth A. Hausler Nicholas Sitar (USA)	Performance of Soil Improvement Techniques in Earthquakes. 10.15
Sanjeev Kumar (USA)	Soil Column Response and Liquefaction Analyses. 10.16
Matthew G. Allen John S. Nickell Steve Sherer (USA)	Geotechnical Characterization of Success Dam for a Dam Safety Earthquake Engineering Evaluation. 10.17
Mark Klyachko (Russia)	Geotechnical Lessons Learnt From Neftegorsk Earthquake. 10.21
Vlatko Sesov Kosta Talaganov (Macedonia)	Relevant Aspects of Applying Soil Improvement Method for Liquefaction Mitigation-Case Study. 10.25
Masanobu Miyazaki Sadayuki Ishizaki Kohji Tokimatsu (Japan)	Effective Stress Analysis of Pile Foundations Showing Various Damage Patterns in Liquefied Deposits During 1995 Hyogoken-Nambu Earthquake. 10.26
Tamotsu Matsui Muneki Mitamura Toshihiko Sakagami Fumio Shimizu Teruyuki Hamada Yasuo Tanaka Seiji Suwa Hiroshi Tsurukawa Akira Takeishi (Japan)	Relevance of Some Damage Factors to Structures Damage in the 1995 Kobe Earthquake. 10.27
Lucio Olivares Francesco Silvestri (Italy)	A Laboratory and Numerical Investigation on a Post-Seismic Induced Settlement in Southern Italy. 10.30
P.K. Koliopoulos B.N. Margaris (Greece)	The 1999 Athens (Greece) Earthquake: Energy and Duration – Related Response Spectral Characteristics of Different Site Conditions. 10.31
Rudolfo B. Sancio Juan M. Mayoral Robb Moss Juan M. Pestana R.B. Seed Jonathan D. Bray (USA)	Attenuation of Peak Ground Acceleration with Distance of the June 15, 1999, Tehuacan, Mexico, Earthquake. 10.32



Nozomu Yoshida Koji Tokimatsu Takeji Kokusho Susumu Yasuda Takashi Okimura (Japan)	Geotechnical Aspect of Damage In Adapazari City During the 1999 Kocaeli, Tuekey, Earthquake. 10.34
Hiroyoshi Kiku Kenji Ishihara Mamoru Kanatani Mamoru Mimura Iwao Morimoto (Japan)	Change of Waterline and Water Depth at Izmit Bay Due to 1999 Kocaeli Earthquake in Turkey. 10.35
Jorge F. Meneses-Loja (USA)	Influence of Post-Strong Seismic Shaking on the Residual Strength of Saturated Sand. 10.37
Berrak Teymur S.P.G.Madabhushi David E. Newland (UK)	Application of Wavelet Theory in the Analysis of Earthquake Motions Recorded During the Kocaeli Earthquake, Turkey 1999. 10.41
G.A. Athanasopoulos P.C. Pelekis V.C. Xenaki (Greece)	Topography Effects in the Athens 1999 Earthquake: The Case of Hotel "Dekelia." 10.42
M. Miyajima T. Hashimoto (Japan)	Damage to Water Supply System and Surface Rupture Due to Fault Movement during the 1999 Ji-Ji Earthquake in Taiwan. 10.45
A. Zulfikar H. Takemiya (Japan)	Near Source Strong Ground Motion Simulation for Kocaeli Earthquake (1999). 10.46
R. Duzceer A. Gokalp E. Savaskan S. Yildirim (Turkey)	The Performance of the Deep Foundation System of a New Automobile Plant Under Construction in Golcuk, Turkey, during the August 17, 1999 Kocaeli Earthquake. 10.47
Predeep Kumar Ramancharla Kimiuro Meguro (Japan)	Non-Linear Modeling of Dip-Slip Faults Using Applied Element Method. 10.48
P.S. Lin C.W. Chang C.C. Hseih S.Y. Lai S.Y. Lin (China)	Liquefaction Assessment and Lateral Spreading in Nantou, Taiwan. 10.49





A.X. Tavares (Brazil)	Liquefaction Studies on Guaratuba Bay Erosion. 10.52
Der-Her Lee Chih-Sheng Ku (China) C. Hsein Juang (USA)	Soil Liquefaction and Ground Settlement in Chi-Chi, Taiwan, Earthquake. 10.53
Ion Vlad Mirela-Nausica Vlad (Romania)	Theoretical and Experimental Engineering Analysis for Seismically Damaged Masonry Buildings. 10.55
H.W. Yang John Beeson (China)	The Setback Distance Concept and 1999 Chi-Chi (Taiwan) Earthquake. 10.56
Chester A. Carville (USA)	Damage from Collapsed Backfill Rock and Soils Behind Retaining Walls Caused by Earthquake Shaking. 10.57
Abdulaziz A.S. Fayez Nassir S. Al-Arifi (Saudi Arabia)	Focal Mechanism Analyses of the 1993, 1995 Northern Red Sea Sequences Activity. 10.58
P.V. Kallou G. Gazetas P.N. Psarropoulos (Greece)	A Case History on Soil and Topographic Effects in the 7 <sup>th</sup> September 1999 Athens Earthquake. 10.59
P.N. Psarropoulos G. Gazetas (Greece) G. Mylonakis (USA) T. Tazoh (Japan)	Soil and Valley Effects in Bridge Foundation Motion. 10.60

**SESSION 11**  
**Seismic Zonation: Earthquake Risk Assessment with**  
**Earthquake Risk Management, Microzonation Projects**  
**In California, Use of Building Codes to Reduce**  
**Earthquake Hazards in California**

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